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(54) **SELF-BLUNTING NEEDLE MEDICAL DEVICES AND METHODS OF MANUFACTURE THEREOF**

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(58) **Field of Search** **604/158, 110, 604/159, 161, 162, 164.01, 164.07, 164.08, 164.09, 170.01**

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(57) **ABSTRACT**

A self-blunting needle medical device comprises a needle cannula (18) fixed to a hub (20) having a receiving structure therein such as ferrule (22) and a movable blunting member (14) movably received within the cannula (18). Ferrule (22) defines a passage (38) extending therethrough, within which both the cannula (18) and the movable member (14) can be received and which establishes a coaxial relationship between them. The ferrule (22) defines a first guide surface (40) for directing the blunting end (14a) of the movable member (14) into the central bore of the cannula (18) during assembly. A second guide surface (42) performs the function of guiding the mounting end (18b) of the cannula (18) into ferrule (22) for mounting therein. Typically, the cannula (18) has a tissue puncture tip (18a). When the movable member (14) is retracted into the cannula (18), the puncture tip (18a) is exposed for use, e.g., injection into tissue. The movable member (14) is then moved to an extended position in which blunting end (14a) projects beyond the puncture tip (18a), to render the device safe with regard to subsequent accidental needle sticks. Methods of assembling the self-blunting needle are also presented. In various embodiments, the guide member may be integral with the assembled device or may be defined by a guide member that is used only in the assembly process and from which the assembled device may be removed.

28 Claims, 9 Drawing Sheets

